

### ABSTRACT OF THE DISCLOSURE

A surface-profiling system (20) and a process (32) for  
5 implementing same are presented. The system (20) incorporates  
a vehicle (40) configured to move upon a surface (24). A  
projector (38) is affixed to the vehicle (40) and configured to  
project two-dimensional patterns (22) at a first angle (52)  
substantially perpendicular to the surface (24). A camera (48)  
10 is also affixed to the vehicle (40) and configured to capture  
images (50) of the projected patterns (22) from a second angle  
(54) oblique to the surface (24) as the vehicle (40) moves over  
the surface (24). A computer (72) is configured to produce a  
transverse profile (26) of the surface (24) from each captured  
15 image (50) and configured to derive a longitudinal profile (28)  
of the surface (24) from a series (126) of the transverse  
profiles (26).